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**STATE OF ILLINOIS**  
**ILLINOIS COMMERCE COMMISSION**

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<b>COMMONWEALTH EDISON COMPANY</b>	:	
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<b>Petition to implement a competitive</b>	:	<b>Docket No. 05-0159</b>
<b>procurement process by establishing Rider CPP,</b>	:	
<b>Rider PPO-MVM, Rider TS-CPP and revising</b>	:	
<b>Rider PPO-MI</b>	:	
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**Direct Testimony of**  
  
**Dr. Arthur B. Laffer**  
**Laffer Associates**  
  
**on behalf of**  
  
**The Building Owners and Managers Association of Chicago**

1 Q. Please state your name and business address.

2 A. My name is Dr. Arthur B. Laffer. My business address is 5405 Morehouse Drive  
3 Suite 340, San Diego, California 92121.

4 Q. What is your current position?

5 A. I am the Chairman of Laffer Associates, an economic research and consulting  
6 firm that I founded in 1979.

7 Q. On whose behalf are you testifying in this proceeding?

8 A. I am testifying on behalf of the Building Owners and Managers Association of  
9 Chicago ("BOMA/Chicago" or "BOMA").

10 Q. What are the purposes of your testimony?

11 A. The purposes of my testimony are the following:

- 12 • To analyze the design of ComEd's electricity supply procurement auction  
13 proposal to determine whether it is designed in a manner most likely to result in  
14 the lowest possible costs for electricity supply. I believe there are problems with  
15 ComEd's proposed system which result in higher prices for consumers than  
16 justified by economics.
- 17 • To recommend a modification to ComEd's proposal whereby the auction's  
18 descending price bidding would continue until no bidder is willing to supply  
19 electricity at a lower price. At that point, the auction would be completed.  
20 Winning bids would be determined in ascending order by price until enough  
21 tranches of electricity were supplied to meet ComEd's full requirements for  
22 electricity. Winning bidders would be paid the price of their specific bid, rather

than all winning bidders being paid the same uniform, “market clearing” price, as ComEd has proposed. It is my opinion that this “pay as bid” approach would result in lower electricity supply costs than the approach proposed by ComEd.

- To explain why the Supplier Forward Contracts (“SFCs”) resulting from the auction are not market traded or exchange traded futures contracts.

**I. Background and Qualifications**

Q. Please summarize your educational and professional qualifications.

A. I have been involved in economics my whole adult life. In the broadest outline, my career has been dedicated to the development of effective competitive markets that serve as engines of growth. I received a B.A. in economics from Yale University in 1963 and an MBA and a Ph.D. in economics from Stanford University in 1965 and 1971, respectively.

During the years 1972 to 1977, I was a consultant to Secretary of the Treasury William Simon, Secretary of Defense Don Rumsfeld, and Secretary of the Treasury George Shultz. I was the first person to hold the title of Chief Economist at the Office of Management and Budget (OMB) under Mr. Shultz from October 1970 to July 1972.

I am a founding member of the Congressional Policy Advisory Board, a small group of advisors who assisted in shaping legislative policies for the 105th, 106th, and 107th United States Congresses.

I was a member of President Reagan's Economic Policy Advisory Board for both of his terms (1981-1989).

45 I was the Distinguished University Professor at Pepperdine University and  
46 a member of the Pepperdine Board of Directors from 1986 to 1989. I also was the  
47 Charles B. Thornton Professor of Business Economics at the University of  
48 Southern California from 1976 to 1985. I was an Associate Professor of Business  
49 Economics at the University of Chicago from 1970 to 1976 and a member of the  
50 University of Chicago faculty from 1967 through 1976.

51 In 1968, while on the faculty of the University of Chicago, I became a  
52 consultant to the Blue Chip "Wall Street" firm, H.C. Wainwright & Co. I stayed  
53 with H.C. Wainwright & Co. until I formed my own economic advisory firm,  
54 Laffer Associates, in 1979. Laffer Associates is an economic research firm  
55 serving the financial industry in the U.S. and abroad. I also chair Laffer  
56 Investments, which is an institutional money management firm co-owned by  
57 General Electric Pension Trust.

58 I currently sit on the board of directors of several public companies  
59 including Veolia Environment, Provide Commerce, Petco Animal Supplies, MPS  
60 Group, Nicholas-Applegate Growth Equity Fund and Oxigene Inc. I was  
61 formerly on the board of directors of a number of public companies including  
62 PacifiCare Health Systems, MasTec Inc., Neff Corp. and US Filter Corporation  
63 among others. I also am involved with a number of private companies.

64 Q. Have you been noted for any particular accomplishments during your career?

65 A. Yes. I was heavily involved in the world-wide tax-cutting movement in the 1970s  
66 and 1980s which earned me the distinction in many publications as "The Father of  
67 Supply-Side Economics." Time Magazine's March 29, 1999 cover story "The

68 Century's Greatest Minds" credited me for inventing the Laffer Curve, which  
69 Time Magazine deemed one of "a few of the advances that powered this  
70 extraordinary century." I was also listed in "A Dozen Who Shaped the '80s," in  
71 the Los Angeles Times on Jan. 1, 1990, and in "A Gallery of the Greatest People  
72 Who Influenced Our Daily Business" in the Wall Street Journal on June 23, 1989.  
73 The Laffer Curve was deemed a "memorable event" in financial history by the  
74 Institutional Investor magazine in its July 1992 Silver Anniversary issue. More  
75 recently in May of this year, Forbes Magazine listed the Laffer Curve as one of  
76 the "Ten Laws of the Modern World."

77 The awards that I have received for my economic work include: two  
78 Graham and Dodd Awards from the Financial Analyst Federation for outstanding  
79 feature articles published in the Financial Analysts Journal; the Distinguished  
80 Service Award by the National Association of Investment Clubs; the Adam Smith  
81 Award for insights and contributions to the Wealth of Nations; and the Daniel  
82 Webster Award for public speaking by the International Platform Association.

83 Q. Have you written any articles that pertain to auctions and competitive markets?

84 A. Yes. I have written articles that are often referenced in the economics literature  
85 on auctions and competitive markets. These articles include "The Number of  
86 Firms and Competition" (written with Eugene Fama), which was published in the  
87 American Economic Review in 1972, and "Information and Capital Markets"  
88 (written with Eugene Fama), which was published in the Journal of Business in  
89 1971. I have authored numerous other articles, including "Does Oil Decontrol  
90 Mean Lower Prices?" (written with Charles W. Kadlec), published in the

September 2, 1979 edition of *The New York Times*. Laffer Associates has also published many economic studies, including “Oil Decontrol: The Power of Incentives” (written by Gerald W. Bollman, Victor A. Canto and Kevin A. Melich), published in 1981.

Q. Historically, electricity has been generated and delivered by regulated monopoly utilities. Are you of the view that a competitive market for electricity can work?

A. Yes. Competitive markets for electricity not only can work, they have been working. In several states and in certain other countries, the electricity industry has been undergoing a process of restructuring from vertically integrated, regulated monopolies to more competitive structures. But competitive electricity markets do not arise spontaneously. States must create appropriate market structures and market rules so that real competition results and consumers benefit.

## **II. Analysis of ComEd’s Auction Proposal**

Q. Are you familiar with the auction process that Commonwealth Edison Company (“ComEd”) has proposed to use for procurement of its full requirements for electricity supply beginning January 1, 2007?

A. Yes. I have reviewed the direct testimony of ComEd’s witnesses who have described ComEd’s proposed auction procurement process. (E.g., ComEd Exhibit 3.0, pages 27-28, lines 582-606, pages 37-38, lines 803-810, and pages 46-47, lines 1004-1022; ComEd Exhibit 4.0, pages 26-29, lines 604-682, page 36, lines 849-859, pages 42-45, lines 989-1053, page 50, lines 1176-1182, and page 63, lines 1497-1503; ComEd Exhibit 8.0, pages 43-45, lines 923-946, and pages 53-54, lines 1124-1154).

ComEd's proposed auction starts with a high price resulting in many bidders willing to supply much more electricity at that price than ComEd's full requirements. The price for supply then ticks down to lower prices in descending order, and bidders choose whether to remain in the auction and how much quantity they are willing to supply at each new price. As prices drop, the quantity of electricity that suppliers are willing to supply also drops – a simple supply schedule. At that price where the quantity of electricity offered by suppliers meets ComEd's full electricity requirements, the auction is completed. The bidders (suppliers willing to sell at that price) remaining in the auction receive the price set for that round. If the amount of electricity supply offered in the last round is less than required by ComEd's full requirements, then the price reverts back to the higher priced prior round (the "exit price") and all bids are accepted to meet ComEd's requirements at the "exit price." In this case all bidders are paid that "exit price," even though that "exit price" is higher than the current auction round's price.

ComEd's approach provides successful bidders with a uniform, market clearing price even though some of those bidders would have been willing to offer to supply tranches of electricity at lower prices. This type of auction is known as a market clearing price auction.

Q. Can you explain what is meant by a "pay as bid" price auction?

A. In a pay as bid auction, bidders who are willing to supply electricity are paid the prices those bidders offered, rather than being paid a uniform, market clearing

price as is the case with ComEd's proposed auction structure. Pay as bid auctions are also known as a "multiple price" or "discriminatory" auctions.

Q. Have pay as bid auctions been used before?

A. Yes. The United States Treasury Department has been using pay as bid auctions to issue notes and bonds since the 1970s, and has used pay as bid auctions for Treasury bills since 1929. (Malvey, P. and Archibald, C., Uniform Price Auctions – Update of the Treasury Experience, Office of Market Finance, United States Department of the Treasury (October 1998), at 2 and 2 n.3). Another example of a pay as bid auction is the auction of licenses for electromagnetic spectra conducted by the Federal Communications Commission (the "FCC"). In that auction, the highest bidder for a license for a portion of the electromagnetic spectra wins the license and pays the amount of its winning bid. (47 CFR Ch. I, Subch. A, Part 1, Subpart Q, Sec. 1.2104; see also, About Auctions at <http://wireless.fcc.gov/auctions>). Like ComEd's proposed auction, the FCC's auction of licenses for electromagnetic spectra also is a simultaneous, multiple round auction.

Q. Has the pay as bid approach been used before in markets for electricity supply?

A. Yes, a pay as bid format is currently in use in the wholesale electricity market for England and Wales.

England and Wales privatized their electricity industry and established wholesale electricity competition in 1990. Although not on this topic, I served as an economic adviser to Margaret Thatcher, who was then Prime Minister of the United Kingdom. One of Mrs. Thatcher's chief policy goals was to create



competitive markets in what had previously been government-controlled industries, such as the electricity industry. England and Wales were pioneers in the creation of competitive electricity markets.

Q. Did England and Wales begin utilizing a pay as bid auction format when they established wholesale electricity competition in 1990?

A. No. Under its 1990 reforms England and Wales established the Electricity Pool of England and Wales (the "Electricity Pool"). Generators were required to sell their output to the Electricity Pool. Generators specified their wholesale offering price and the Electricity Pool paid all generators the same price, which was the price of the highest accepted offer. (Office of Gas and Electricity Markets ("OFGEM") (UK), The New Electricity Trading Arrangements, Volume 1, July 1999, at 2). This original approach used by England and Wales was essentially the same as the approach proposed by ComEd in this case: a uniform, market clearing price.

In their own estimation, however, England and Wales did not have a favorable experience with the uniform, market clearing price mechanism. As the United Kingdom's Office of Gas and Electric Markets stated in a report issued in 1999:

In particular, bids into the Pool by generators are not reflective of costs and movements in Pool prices have not matched reductions in costs. Since 1990 wholesale electricity prices have been largely unchanged, while the costs of generation in terms of fuel costs and capital and operating costs have reduced by almost 50%. Market power has been a factor in maintaining or increasing Pool prices. But the present trading arrangements have facilitated the exercise of market power at the expense of customers by enabling all generators to receive a uniform price which in practice has been set by just a few of them.

(OFGEM (UK), The New Electricity Trading Arrangements, Volume 1, July 1999, at 2).

Q. Did the United Kingdom's Office of Gas and Electricity Markets ("OFGEM") take action to correct this situation?

A. Yes. In March 2001, OFGEM implemented reforms to their prior uniform, market clearing price. The single most important reform was to eliminate the uniform, market clearing price paid to electricity generators, and in its stead to institute a pay as bid arrangement.

Q. What were the results of this change from a uniform, market clearing price to a pay as bid format in the England and Wales wholesale electricity market?

A. OFGEM reported favorable results for the first year of the pay as bid trading arrangements. In a report issued in 2002, OFGEM stated:

"Over the first year of NETA annual baseload prices fell by 20% and peak prices by 27%. Spot prices also showed similar declines, with prices on the UKPX [United Kingdom Power Exchange] down by 32% over the same period."

(Office of Gas and Electricity Markets, The Review of the First Year of NETA, July 2002, at 50).

Q. Did the OFGEM report to which you refer provide any further information on prices subsequent to the first year of the pay as bid price mechanism?

A. Yes. OFGEM reported that between March 2002 and July 2002 there was an increase in the electricity prices under consideration and discussed the causes of that increase:

Since March [2002] baseload prices have increased by 6% and peak prices have increased by 11% (see Figure 4.16). This is likely

213 to be related to the fact that, as of 1 April 2002 a total of 2.7 GW  
214 of plant were mothballed, (0.5 GW of which were returned to the  
215 system in July 2002) and gas prices rose by 5% to 20p/th [pence  
216 per therm] between March and July 2002 [Reference to chart  
217 omitted].  
218

219 (Office of Gas and Electricity Markets, The Review of the First Year of  
220 NETA, July 2002, at 47).

221 Q. Do you believe that ComEd's proposed auction process will enable it to procure  
222 electricity supply at the least cost?

223 A. No. To the contrary, ComEd's proposal to pay winning bidders a uniform, market  
224 clearing price ensures that ComEd will pay more than it has to pay to procure its  
225 full requirements for electricity supply. It's just common sense. If the final  
226 suppliers were separately willing to sell electricity to ComEd at various prices,  
227 ComEd would still pay each of the suppliers the highest price of those willing to  
228 sell in the final round. From the standpoint of electricity consumers, this just  
229 doesn't make sense. The uniform, market clearing price auction proposed by  
230 ComEd will reduce competition in price setting among bidders compared to the  
231 system I am proposing herein.

232 Q. Is it your opinion that a pay as bid approach would make the auction more  
233 competitive?

234 A. Yes. A pay as bid auction format would make the auction more competitive  
235 because each bidder will have to know its own marginal cost including sufficient  
236 profit to remain in business, and each bidder must then confront the risks and  
237 rewards of the auction as that bidder sees fit. The bidder will bid the minimum  
238 price it would be willing to accept because only by bidding the minimum price

can the bidder assure success under the pay as bid approach. With a pay as bid mechanism, ComEd's descending clock auction would be as competitive as the typical ascending auction of goods, in which even the last bidder is unsure whether he has won the item until the auctioneer's hammer comes down.

### **III. Recommended Improvements to ComEd's Auction Proposal**

**Q.** Do you recommend improvements to ComEd's proposed auction process that would enable ComEd to procure electricity supply at a lesser cost?

**A.** Yes. I recommend a pay as bid approach be used in order to make ComEd's proposed auction both more competitive and more likely to achieve a lower cost of electricity supply. The pay as bid approach takes advantage of all the information inherent in the supply schedule. Instead of stopping the auction at that price where the supply of electricity equals ComEd's full requirements load, the bidding would continue to "tick down" until no bidder willing to supply a single unit of electricity at a lower price remains.

Each bid accepted would be at the lowest price at which the bidder was willing to sell electricity. Offers to sell electricity would be accepted in their order of ascending price beginning with the lowest price up to that price where the utility's full electricity requirements were supplied. No price would be paid to any supplier in excess of the price that supplier was willing to sell electricity. The savings could be enormous and would inure greatly to consumers.

**Q.** Are you aware of any other auctions in which rounds of bidding continue until all bidding activity stops?

261 A. Yes. Earlier I referred to auctions conducted by the FCC for licenses for  
262 electromagnetic spectra. As the FCC itself describes this auction, “[t]he bidding  
263 continues, round after round, until a round occurs in which all bidder activity  
264 ceases. That round becomes the closing round of the auction.” (See About  
265 Auctions at <http://wireless.fcc.gov/auctions>). The modification we propose to  
266 ComEd’s proposed auction operates in a similar way.

267 Q. Under the improvements you describe, then, would winning bidders be paid a  
268 uniform, market clearing price, or would they be paid at the lowest price at which  
269 they would be willing to sell electricity to ComEd?

270 A. They would be paid the lowest price at which they would be willing to sell  
271 electricity to ComEd.

272 Q. Will your modification to ComEd’s proposed auction process make it more likely  
273 that bidders will make bids closer to their marginal cost?

274 A. Yes. As discussed earlier, under ComEd’s proposal the auction stops at that price  
275 where the supply just equals demand and all bidders are paid the uniform, market  
276 clearing price, regardless of what their marginal costs are. In contrast, the  
277 continuation of the auction under the pay as bid approach until no bidder is  
278 willing to bid any more causes each bidder to focus on its own marginal costs.  
279 ComEd’s proposal for a uniform, market clearing price auction does not take  
280 advantage of the whole supply curve because the bidding stops when supply (the  
281 amount of electricity supply offered by the bidders) equals the demand (ComEd’s  
282 full electricity requirements). By stopping the bidding process at that price,  
283 ComEd is missing a wealth of information that can reduce costs and benefit

284 consumers. Paying one single market clearing price to all winning bidders ensures  
285 that ComEd will procure its electricity supply at the highest price. If the auction  
286 were to continue down the supply schedule, the cost will surely be lower to  
287 consumers.

288 Q. Under ComEd's proposed market clearing price auction, could a bidder who is  
289 bidding a number of tranches of electricity supply force the auction to close at a  
290 price higher than would otherwise have been the case by withdrawing some of  
291 those tranches?

292 A. Yes. If the bidder knows the amount of electricity supply being offered is only  
293 slightly higher than ComEd's full requirement, then by withdrawing an  
294 unjustifiably large amount of units from the next auction round that bidder can  
295 assure that the "exit price" reverts to the higher priced prior round and the bidder  
296 will still sell all the units it wishes to sell – only at a higher price. This is a classic  
297 example of Game Theory, or what is known in common parlance, as game  
298 playing the system.

299 Q. Could this happen under a pay as bid auction approach?

300 A. No. As I discuss in more detail later, under our proposed modification the auction  
301 manager would not provide bidders with information on the results of each round.

302 Q. ComEd's witnesses emphasize the need for "transparency" of ComEd's proposed  
303 auction process, which to those witnesses means that prior to the commencement  
304 of a new bidding round, bidders are given information on the number of tranches  
305 that were bid in the preceding round. Under the pay as bid approach, would  
306 bidders be provided with this information from round to round?

307 A. Certainly not. The transparency those witnesses mentioned only serves to benefit  
308 the bidders and only encourages game playing of the system and implicit  
309 collusion. The information ComEd proposes to divulge does not help the  
310 consumers one iota. Divulging the number of bids after each round signals the  
311 amount of remaining interest in the auction. ComEd's proposed auction gives  
312 bidders the opportunity to learn about the bidding behavior of other bidders and  
313 thereby allows those bidders to adapt their bidding strategies accordingly.  
314 Bidders would use this information to keep the market price of electricity well  
315 above their own marginal cost. I think announcing the number of bids after each  
316 round is a serious mistake.

317 I recommend that when the price offered continues to "tick down" that  
318 bidders not be informed of the number of tranches (i.e., the amount of electricity  
319 supply) bid for the preceding round. What ComEd refers to as "transparency that  
320 promotes competition" (e.g., ComEd Exhibit 3.0, page 14, lines 312-314, page 32,  
321 lines 689-699; ComEd Exhibit 4.0, page 29, lines 677-681; page 44, 1027-1031,  
322 page 59, lines 1394-1396, and pages 62-63, lines 1490-1503; ComEd Exhibit 8.0,  
323 page 44, lines 928-932) is really just the opposite. ComEd's concept of  
324 transparency only provides electricity sellers with insider information that can be  
325 used to harm consumers. In an auction such as the one ComEd has proposed,  
326 which contemplates repeated rounds of bidding, such information could facilitate  
327 bidding behavior that leads to non-competitive outcomes and markedly higher  
328 prices.

Under our modification, bidders would not be informed of the number of tranches bid into a preceding round; rather, bidders would be informed of the completion of the auction only when the auction is complete, and not before. A bidder's attention will be focused solely on its own internal marginal cost and whether that bidder can still make a reasonable profit by supplying a given number of tranches at the price set for the current round.

Q. ComEd says that it will cease providing bidders with information on the results of preceding rounds when the total quantities bid are close to ComEd's full requirements. Does this solve the problem that you are discussing?

A. No. As soon as ComEd goes silent everyone will know that the quantities bid are close to ComEd's full requirements.

Q. Exelon Generation, ComEd's affiliate, owns all of the nuclear-powered electricity baseload generating facilities in Illinois. Could this have an effect on the auction in the form that ComEd has proposed?

A. Yes, and the relationship among ComEd, Exelon Generation and Exelon Corporation bears directly on the decision of whether to use a uniform, market clearing price auction format versus a pay as bid auction format. The situation is quite simple. ComEd and Exelon Generation are sister corporations and wholly-owned subsidiaries of Exelon Corporation, which itself is a publicly-traded company. For profit reasons Exelon Generation needs to sell the electricity generated by its 10,222 megawatts of nuclear generating facilities located in the ComEd service territory. ComEd in turn is expected to purchase significant amounts of electricity either directly from Exelon Generation or from other



winning bidders who have purchased electricity from Exelon Generation. The higher the price of ComEd's electricity supply, the more Exelon Generation stands to gain, which in turn will benefit the consolidated financial results of Exelon Corporation. It is only natural that ComEd would want to use a uniform, market clearing price because a uniform market clearing price results in the highest price being paid to all winning bidders, including Exelon Generation.

ComEd has a very understandable, but nevertheless serious, conflict of interest here. Under ComEd's proposed uniform, market-clearing price auction, Exelon Generation, with low-cost nuclear generation, could simply act as a passive price-taker, and let the market price be set by higher-cost producers. Under ComEd's uniform, market clearing price proposal, ComEd helps Exelon Generation, and itself, at the expense of the electricity consumers of Illinois. Under our pay as bid approach it is likely that electricity produced by Exelon Generation's nuclear units would be sold to ComEd at a significantly lower price than it would be sold to ComEd under ComEd's approach. Suppliers of electricity from low-cost generating units will not receive a uniform, market clearing price established by the high cost suppliers of electricity under our pay as bid approach.

Q. Would your proposed modification of ComEd's proposed auction process make the exercise of market power by companies who own large amounts of generating capacity in ComEd's service territory more difficult?

A. Yes, because the bidders will be more likely to aggressively bid closer to their marginal costs of production rather than simply taking the price set by the successful bidders with the highest marginal costs of production. The pay as bid

375 approach will make the auction more competitive. The owners of large amounts  
376 of generating capacity will find it more difficult to benefit unfairly from their  
377 market power.

378 Q. ComEd proposes to use a load cap for bidders, i.e., no bidder may bid on more  
379 than fifty percent of the tranches of electricity to be supplied. However, there is  
380 no limitation on how much electricity can be supplied to bidders in the auction.  
381 Will the use of such a load cap prevent the exercise of market power by a bidder  
382 such as Exelon Generation in the auction proposed by ComEd?

383 A. No. Exelon Generation could sell all of its baseload generation on its own and/or  
384 through sales to financial players who own no generation assets, regardless of the  
385 amount of the load cap. The load cap applies only to bidders and not to the  
386 ultimate sources of the electricity. (E.g., ComEd Exhibit 3.0, page 47, line 1022;  
387 ComEd Exhibit 8.0, page 51, lines 1080-1083).

388 **IV. Discussion of Market Traded or Exchange Traded Futures Contracts**

389 Q. Are you familiar with exchange traded or other market traded futures contracts?

390 A. Yes.

391 Q. What is a futures contract?

392 A. A futures contract is an obligation to make delivery (if you are the seller) or to  
393 take delivery (if you are the buyer) of a specific amount of a commodity (or a  
394 financial instrument) at a particular price at a specific future date or in a stipulated  
395 future month.

396 Q. Do the buyer and seller of the commodity enter into a futures contract with each  
397 other?

398 A. No. The clearinghouse of the commodity exchange or market is the counterparty  
399 to the contract with each of the buyer and the seller.

400 Q. What is a clearinghouse?

401 A. In the context of futures contracts, a clearinghouse is the division of the  
402 commodities exchange or market through which all trades made must be  
403 confirmed, matched and settled each day until offset or delivered. The  
404 clearinghouse is responsible for such things as settling trading accounts, clearing  
405 trades, collecting and maintaining margin funds, regulating delivery and reporting  
406 trading data.

407 Q. Please provide examples of futures contracts.

408 A. One example of a futures contract is a contract for, say, December 2005 wheat on  
409 the Chicago Board of Trade ("CBT"). Another example is a January 2006 futures  
410 contract for No. 2 heating oil on the New York Mercantile Exchange  
411 ("NYMEX").

412 Q. Can you identify some important characteristics of futures contracts?

413 A. Yes. Many important terms of futures contracts are standardized under rules and  
414 regulations of the relevant commodity exchange or market, such as NYMEX or  
415 CBT, rather than by the buyer and seller. Among the standard terms are  
416 commodity type and quality, delivery point, fixed quantity per contract, and  
417 delivery month or date. For instance, with regard to the examples of futures  
418 contracts that I gave earlier, wheat futures contracts trade in units of 5,000 bushels  
419 per contract on the CBT and No. 2 heating oil futures contracts trade in units of  
420 42,000 gallons per contract on the NYMEX.

421 Q. What is the reason for such standardization?

422 A. The purpose of standardized contract terms is to facilitate trading of futures  
423 contracts on the commodities exchange or market. The futures contracts are then  
424 more tradable, or “liquid.” The futures contracts can then be used by futures  
425 market participants to hedge price risks in the underlying commodity.

426 Q. Is ComEd’s proposed Supplier Forward Contract an exchange traded or other  
427 market traded futures contract?

428 A. No, the ComEd Supplier Forward Contract (“SFC”) is not a futures contract as  
429 that term is generally understood in recognized financial markets. As I discussed  
430 earlier, in a futures contract the clearinghouse of the commodities exchange or  
431 market is the counterparty in separate contracts with each of the seller and the  
432 buyer. Furthermore, a futures contract contemplates a delivery of the subject  
433 commodity in specific quantities, at a specific price, and for delivery at a future  
434 date. The SFCs ComEd proposes to use are indefinite as to quantity because they  
435 call for the supplier to deliver a portion of ComEd’s full requirements for  
436 electricity supply. This portion of ComEd’s full requirements will of course vary  
437 over the term of its proposed contract. I know of no futures contract regularly  
438 traded on a recognized exchange in which the seller is completely exposed to  
439 volume risk. The Supplier Forward Contracts contemplated by ComEd’s  
440 proposed auction are simply ordinary forward requirements contracts for delivery  
441 of the subject commodity over a period of one, three or five years, as the case may  
442 be.

443 Q. Is ComEd's proposed auction an exchange or market on which future contracts  
444 are traded?

445 A. No. ComEd's auction is not a futures market or futures exchange, as that term is  
446 generally understood in financial markets today. ComEd's auction will take place  
447 once per year, while an exchange such as the NYMEX is generally open on every  
448 business day of the year. Moreover, as I discussed earlier, the Supplier Forward  
449 Contracts ("SFCs") which result from the auction are not futures contracts.  
450 ComEd's auction is clearly not an exchange or market on which futures contracts  
451 are traded.

452 Q. Can you provide an example of such an exchange or market on which electricity  
453 futures contracts trade?

454 A. Yes. Electricity futures contracts are traded on the New York Mercantile  
455 Exchange.

456 Q. Does this conclude your direct testimony?

457 A. Yes.